

**Norphlet Chemical Project**  
**Report for Week Ending February 29, 2008**  
**By Craig Wilson**

Subsequent to the filing of this report an agreement was reached with Mr. Iikubo (to include Steve Owens). Evert Talbot will give a verbal report on the agreement during the March 5 conference call.

### **Consultant Search**

The Fluoromer LLC (Iikubo) proposal was discussed with the Norphlet Chemical's Operating Committee in a conference call on Wednesday, February 27. A recommended counter-proposal was also presented. There was a general concern among the group that Iikubo's proposed consulting and process fees were excessive and that an effort should be made to contact other consultants. Ronnie Jackson had previously contacted a former DuPont employee, Bob Boyajian, on the recommendation of Bill Gumprecht (Cecon Consultants). As a start, Bob Boyajian proposed a one-day review of Norphlet's process flowsheets and operating data to determine if he would be able to re-design the plant to produce R-134a. He offered to do this for a fee of \$800. Also, in an earlier conversation with Evert, Mark Nagle of Tulstar, LLC suggested that Norphlet contact two former Honeywell employees that might be able to provide the required consulting services.

A conference call was held with Bob Boyajian, Evert, Ronnie, Vic and Craig on Thursday, February 28. Bob started the conversation by stating that Norphlet had found the "right person" for solving Norphlet's issues. He then justified his claim by listing his experience. He has several years of experience in Fluorochemicals. He has experience with the production of CFC-11, CFC-12 and, more importantly, R-152a which he claims is an analogous process to R-134a. He has also had significant experience in conducting due diligence for equity joint ventures involving fluorochemical plants.

Like most of the consultants we have talked with so far, Bob Boyajian offered some useful information, but didn't have the expertise to resolve Norphlet's process issues. When challenged on some of the statements he made, he couldn't back up his claims. Like Bill Gumprecht, he pointed out the fact that we have some very difficult process challenges to overcome. He also expressed the concern that even if Norphlet was able to overcome the technical issues to produce R-134a, they might not be able to do it cost effectively. He understood the position that the Norphlet investors found themselves in (a significant investment with no returns to date) and stressed that the only viable option, in his opinion, was a "business" solution where Norphlet partnered with a current R-134a producer. I share his concerns on the process technology and cost issues but his proposed solution is likely not workable.

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Bob Boyajian's conclusion was that inadequate chemistry work had been done prior to building Norphlet's plant. Recognizing that the investor's had a significant investment in the project and that we couldn't live with a 2-year delay, he said that, in his opinion, our only option was to enter into an agreement with an established R-134a producer with the applicable process knowledge. He speculated that they might be receptive to the idea as it would give them additional R-134a capacity for a relatively small incremental investment. He has already had discussions with someone at Arkema and suggested them as a potential partner. When asked, he didn't know if there was a need for additional 134a in the marketplace. Ronnie also explained to him that the Norphlet plant was built on a toll manufacturing business model with another company.

Evert has made contact with David Edwards and Wally Derlan (the Honeywell employees recommended by Mark Nagle). They submitted a proposal with three options.

- David and Wally perform consulting services for Norphlet at an estimated cost of \$543K
- David and Wally become full-time Norphlet employees for a minimum of 3 years by contract at an estimated cost of \$1,044K
- David performs consulting services for Norphlet and Wally becomes a full-time Norphlet employee at an estimated cost of \$982K

Although David and Wally have extensive management experience with refrigerant processes including R-134a, they don't appear to have the process engineering expertise that we need and did not offer any form of a process guarantee. In addition, their proposal for consulting is more costly than Fluoromer's. However, in contrast with the Fluoromer proposal, they have not asked for royalties or process fees, which would make their overall costs lower (if the assumption is made that they can deliver on the process).

Going forward, we still need

1. A consultant or mix of consultants who can resolve the outstanding process issues
2. An estimate of the incremental capital and operating costs that will be required to produce R-134a and HCl
3. An evaluation as to whether there will be an adequate return on investment to take the project through to completion

Evert, Ronnie, Vic and I are more confident in Ikubo's ability to resolve the process issues with the Norphlet plant than any of the other consultants we have talked to up to this point. I recommend that we continue to negotiate with Ikubo (Fluoromer) in an attempt to structure an agreement that

- 1 Provides Norphlet with enough process and equipment details to facilitate a determination of the future costs needed to complete the plant construction
  - 2 Gives Norphlet the option to avoid any future consulting or process fees in the event that they decide to discontinue the project
  - 3 Provides fair compensation to Ikubo for his consulting services and expertise
  - 4 Decreases Fluoromers' scope of work during the Construction & Start-up phases
  - 5 Allows for reasonable process fees for Ikubo which are contingent upon successful plant operation and based on a percentage of tolling revenues
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#### **Plans for week of March 3<sup>rd</sup>:**

I plan to take part in a conference call with Evert and Ikubo this week to present a counter-proposal. I will be in Ohio for the remainder of the week and will stay in contact by cell phone.

#### **Open Issues:**

- Implement plan for removal of corrosive material from storage tanks
- Refine Counter-Proposal and submit to Fluoromer, LLC (Ikubo)
- TCE+HF to R-133a Reaction, Decision on Gas or Liquid Phase
- Liquid Phase Reaction, TaF<sub>5</sub> vs SbCl<sub>5</sub> decision
- Process Engineering – define additional process steps/changes (Fluoromer or others)
- Refine Project Schedule (Design/Equipment Ordering/Installation)
- Visit Engineering/Construction firms to assess capabilities for completing plant modifications/additions